

What is claimed is:

Sub
a1
5 1. A Raman amplifier which is provided with an optical fiber for Raman amplification and a pump light introducing means, said optical fiber transmitting signal light and Raman-amplifying said signal light by pump light introduced thereinto, said pump light introducing means introducing, as said pump light, light having a wavelength that is within the amplification wavelength band of an Er-doped optical fiber amplifier into said optical fiber for Raman amplification.

10 2. A Raman amplifier according to Claim 1, wherein the wavelength of said pump light is 1535 nm or more but not more than 1605 nm.

Sub
c1
3 3. A Raman amplifier according to Claim 1, wherein said pump light introducing means is provided with an Er-doped optical fiber amplifier which amplifies said pump light and introduces said amplified pump light into said optical fiber for Raman amplification.

Sub
a2
15 4. A Raman amplifier according to Claim 1, wherein the absolute value of the chromatic dispersion in 1.65 μ m wavelength of said optical fiber for Raman amplification is in the range of 0.1 to 10ps/nm/km.

Sub
c1
3 5. A Raman amplifier according to Claim 1, wherein the effective area of said optical fiber for Raman amplification at 1.55 μ m wavelength is equal to or
a 20 less than 85 % of the effective area at 1.65 μ m wavelength .

Sub
a3
6. An optical transmission system provided with a Raman amplifier in a repeater section thereof, said Raman amplifier being equipped with (1) an optical fiber for Raman-amplification which transmits signal light and Raman-

a3
End

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Sub C

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